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Forest & Shade Tree - Insect & Disease Conditions for Maine
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Introduction

Invasive Pest Trading Cards

If you receive a paper copy of this bulletin, you will notice that this month's issue was accompanied by convenient wallet-sized cards with information about Asian longhorned beetle and emerald ash borer. Although their value as trading cards is questionable, their value in helping to recognize two destructive forest pests is certain. If you do not want the enclosed cards—maybe you already have a set—please pass them on to somebody who can use them. If you would like more to share with coworkers, friends and family please let us know. If you receive an electronic version of this report and would like a set of cards to help you or those you know recognize Asian longhorned beetle and emerald ash borer and the damage they cause please contact the Lab. You can reach us at (207) 287-2431 or forestinfo@maine.gov.



More Invasive Pest News

The Maine Department of Agriculture received a \$75,000 grant from the U.S. Department of Agriculture to conduct an outreach and survey program for Asian longhorned beetle (ALB), an invasive insect already responsible for the destruction of more than 25,000 trees in Massachusetts this past year. Asian longhorned beetle was first detected in New York in 1996 and subsequently in Illinois and New Jersey. To help promote this effort the Governor has proclaimed August as "Asian Longhorned Beetle Awareness Month", because this is the time when the adult beetles are most active. The program, currently underway, is focused on informing the general public about ALB and how to recognize and report it.

Three training sessions have been conducted around the state for individuals associated with land trusts, conservation districts, tree care, and other green industries. Over 60 volunteers have been trained to recognize ALB and its associated damage to trees, as well as how to communicate this knowledge to the general public. To date, these volunteers have conducted almost 200 outreach events and activities in their respective communities. The Maine Forest Service personnel have been helping conduct training and outreach sessions.

During August and early September survey events are planned in Portland and Bangor. These surveys will be using trained volunteers and targeting street trees near industrial areas that could serve as a pathway for ALB coming in on solid wood packing material.

If you think you have seen ALB or would like more information on the project visit www.maine.gov/alb.

Insects

Fall Webworm (*Hyphantria cunea*) – After three years of very high populations of this unsightly pest's webs, it looks like the population has plummeted. Moth counts in from light traps around the state are down and webs are few and far between. It takes about three years for parasites and predator populations to respond to high numbers of prey. Cold winter temperatures and a cool wet summer can affect insect populations as well. Enjoy the reprieve, they will be back.

***Gypsy Moth** (*Lymantria dispar*) – We have had very few reports of gypsy moth this season, another casualty of weather - although Grayln Smith reports his pet population on Indian Hill in Greenville is still thriving.

Sawflies – Reports of minor damage from a number of sawflies around the state: birch sawfly (species needs to be determined) is noticeable in western Maine, larch sawfly (*Pristiphora erichsonii*) in Newcastle on ornamentals, yellowheaded spruce sawfly (*Pikonema alaskensis*) scattered around the state on open grown ornamentals.

Diseases and Injuries

Ash Anthracnose (*Gnomoniella fraxini*) – Healthy ash trees tend to shed their leaves quite early in the fall, but they also have a particular tendency to drop their leaves quickly when stressed by any damaging agent. Ash leaves infected with the ash anthracnose pathogen have been falling for the past few weeks in coastal areas. Occurrence of the disease has been widespread this year, but only light to moderate infections have been observed in most locations. The heaviest infections have been near the coast, and some of the ash defoliation there is also compounded by ash leaf rust, a different pathogen. More recent ash anthracnose infections have been reported from Belgrade, Augusta, and other towns more interior from the coast. Leaves have been spotted, but still remain largely green, and premature leaf shedding has not yet started. Moderate or even heavy defoliation at this time of year or later will have very little effect on the growth or health of affected ash.

Ash Decline (Possibly ash yellows phytoplasma) - A significant managed stand of white ash showing decline symptoms was examined recently in Dover-Foxcroft. Inspection of the stand revealed no obvious or primary insect activity, and no apparent causal root rots or other fungal pathogens. Many symptoms were similar to those attributed to ash yellows, a phytoplasma disease that affects phloem function. The symptoms included some (minor) bark cracking and splitting, epicormic sprouting (witches brooms) along the main stem with small yellow leaves on sprouts, and top dieback. Trees of all sizes appear to have been affected to varying degrees, and some mortality has occurred over the past several years.

Tar Leaf Spot of Norway Maples (*Rhytisma acerinum*) - Due to the numerous calls received at the Lab over the past three weeks regarding tar leaf spot defoliation of Norway maples, an expanded discussion on the topic is presented here.

During the past several weeks, homeowners across central, southern, and coastal Maine have seen the foliage of Norway maples develop spots, turn brown, shrivel, and fall prematurely. By early August, Norway maples in the towns of Augusta, Bangor, Brewer, Rockland, Ellsworth, Camden, Belfast, Portland, and many other towns

exhibited an almost scorched appearance. The strikingly evident appearance of the problem has naturally generated widespread concern for long-term health of the trees.

The damage has been caused by a disease called tar leaf spot. There are several different fungi that can cause tar leaf spot diseases. The three fungi affecting maple are in the genus *Rhytisma*. All species of maples in Maine can be affected by tar spot, but the particular pathogen that is most damaging to Norway maples is *Rhytisma acerinum*. The tar spots that can occur on sugar maple, red maple, and our other native maple species is caused by one of two other species of *Rhytisma* (*R. americanum*, and *R. punctatum*). Tar leaf spot diseases that occur on our native maple species are occasionally observed, but cause inconsequential damage.

Leaf infection can begin in early spring, as the leaves are expanding, and can continue into the early summer. Long periods of wet weather including fog, mist and rain, and other conditions that retard leaf drying such as dense continual shading or cloudy weather highly favor the leaf infection process. Not only has this spring and summer season been exceptionally wet, but the extremely wet weather has been now ongoing for several years in succession. This has led to a dramatic buildup in inoculum of the disease, and to the epidemic we have seen this year.

As the infection develops during the spring, small yellow spots appear on the leaves. Eventually, by mid- to late summer, the spots develop black, tar-like stromata, the spore-producing structures of the fungus. Leaves with multiple infections eventually turn brown, and drop prematurely from the tree.

The good news in all of this is that the disease, even though aesthetically damaging to ornamentals and urban and residential street trees, has little detrimental effect on the long-term health of the affected trees. Infected leaves retain most of their photosynthetic capabilities throughout most of the growing season. The buds for growth next year have already been set. Leaf drop is late enough in the season so that a re-foliation by the tree is not triggered. This means that the energy reserves already stored will be sufficient to allow the tree to develop normally next spring.

Norway maple is an exotic tree species. It is found in Maine as an ornamental or street tree in residential or city communities or as an invasive species in the patches of forestland within the same communities. As a rule, it does not occur in more rural forestland, and it should not because of its invasive habit.

Management or control of tar leaf spot is rarely required. There are fungicides that are available and effective, but applications must be made in the early spring, before leaf infections begin (early May). Several applications may be needed, especially if rainy periods extend through the spring and into the early summer, making control a costly proposition. Raking prematurely fallen, infected leaves is a sound sanitation practice, but leaves should be removed from the property or burned (where permissible) to prevent the fungus from re-infecting new leaves the following spring. The fungus will survive the winter in fallen leaves. Removing the leaves to a municipal composting facility is also recommended. If composting the leaves on-site, the leaf piles should be buried, or covered with a thin layer of soil or a dense layer of grass clippings or other compost, to prevent the fungus from spreading next spring. This sanitation practice will help to reduce infections next spring, but will not eliminate the disease entirely.

Tip Blight of Red Pine (*Diplodia pinea* [= *Sphaeropsis sapinea*]) - A significant occurrence of *Diplodia* tip blight was examined in a red pine stand in the town of Amity. The stand is approximately 45 years old and has only light damage to the lower crowns from the disease. However, the understory regeneration has been

heavily infected and serious dieback and some mortality of these younger trees is expected. Much of the natural understory regeneration occurs in the strips where rows of older red pine have been removed during thinning. This is an unusual pattern for *Diplodia* tip blight in Maine. Red pine has been considered the most resistant, compared with the other hard pine hosts. Damage is usually seen on larger trees, and appears as branches dying from the base of the crown upward. These high infection levels in young regeneration has not been observed, or reported before in Maine.

White Pine Blister Rust (*Cronartium ribicola*) - White pine blister rust continues to be a serious problem in many areas, and most notably in the northern half of the state, where *Ribes* control work was never undertaken. High levels of blister rust have been reported most recently from the towns of Stacyville, Bar Harbor and the Mt. Desert region, and were also observed in Amity.

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